

Course: Business Management

Topic: **Introduction to the Process Technology Industry**

Students will be able to:

- Explain what the Process Technology Industry is
- Understand the importance of good communication and team-work
- Explain skills, attitudes, and qualifications needed in the process technology industry
- Describe the types of jobs available in the process technology industry
- Create and illustrate a flow diagram of a multi-step process

Alaska Standards:

Employability A) The student will be able to develop and use employability skills

B) A student should be able to identify career interests and plan for career options

Materials: Computer with internet access, Projector, Poster Paper, student journal, van or bus

Timeline: 3 class periods (85 minutes each class)

Anticipatory/Explanation:

This is an introduction to the Alaskan Process Industry and the opportunities that are open to them. Alaskan companies are seeking qualified Alaskan workers to fill the many jobs that are opening up in Alaska. Today, students will see the basic skills, attitudes and qualifications needed to work in the process technology industry.

Day 1

Warm-up (written on board) 10 Minutes:

Respond in your journal: use the internet to write a 3-5 paragraph description of the different process industries in Alaska.

Teach:

Briefly, have a few students share what they found on the process industries

Project on the board: <http://www.jobs.state.ak.us/hotjobs/index.html> and review the section "Hot Jobs in Oil, Gas, Mining, Construction and Transportation.

- Review and discuss each section with students
- There is a shortage of workers to fill these positions in our state. These companies would rather hire qualified Alaskan workers than qualified workers from the lower 48.
- BP reported that as of now 49% of their workers on the North Slope are eligible to retire today!

Pair share (5 minutes): With a partner, come up with a list of qualities and attitudes a person would need to be successful in a career

Student responses: have a student keep track of the responses on the white-board

Students will vote on the top three characteristics of a successful worker

Activity/contest –Technical writing and communications demonstration

1. 4 teams of 5 students
2. Each team receives 10 Lego pieces
3. As a team, create something with your 10 Lego pieces
4. Write instructions on paper of how to build your creation
5. Your instructions and Lego pieces will be passed to another team
6. Teams will vote on the most creative creation and best instructions
7. The team with the best creation and instructions wins a prize!

Assessment/Reflection: Journal what kinds of behaviors, attitudes, and communication you observed during the Lego activity. Did people act like professionals? Was it the loudest person who made things work? Did everyone contribute? Was there team-work?

Review: There are lots of great opportunities for you in our state. It doesn't mean you'll automatically get into one of those hot jobs... they are looking for people who can get along, solve problems, skilled, communicate well, are reliable and dedicated. Tomorrow we will visit the Waste Water Treatment Plant. This is an opportunity for you to see an example of the process technology industry

Day 2

Activity –Tour Sitka's Waste Water Treatment Plant (85 minutes)

Student assignment: Document the process that is involved at the plant (sewage in to clean water out). Students will need to take notes during their tour and are encouraged to ask questions.

Day 3

Warm-up (written on board) 15 Minutes:

Using your notes from the Water Treatment Plant visit, draw a flow-chart of the process they use -to help students, project an example of a flow chart from BP (see photos from TIE)

Activity 10 minutes:

With a partner, quickly draw out the process on poster board. Use the projected example for the style and layout. The important piece is that you understand how flow diagrams give a clear picture of the steps of the process you observed.

Discuss how flow diagrams can help with problem solving –use BP Flow Station Process Diagram to describe how controllers can work around problems and avoid disasters (TIE Pictures)

Teach 15 Minutes:

PowerPoint of TIE 2012 Visit with BP (20 Minutes): Use BP as an example to define the oil process industry.

Assignment 50+ Minutes:

In pairs, from a hat (industries listed on pieces of paper) choose one of the process industries in Alaska, create a PowerPoint presentation that describes the following:

1. Names of the companies operating in the industry
2. Mission statement from one company

3. Where they are operating (one location or several?)
4. What types of jobs do they have?
5. What certifications or degrees are required to qualify for the jobs
6. Where can Alaskans get the degree or certification they need to get into those jobs?

You will have to work quickly to finish this it will be due by the end of next class. We will present each PowerPoint and grade each others work using the rubric (see attached). You will also receive credit for turning in your grading rubric with each team member's name.

Review/Conclusion:

What is the process technology industry in Alaska about?

What kinds of jobs are available to Alaskans?

What kinds of skills, attitudes and certifications are needed for these jobs?

Where can you go to get the required certifications?

Project on board: <http://www.jobs.state.ak.us/hotjobs/index.html> and go to job seekers resources

Assessment:

Journal responses to warm-up activities will evaluated with Journal Grading Rubric

Flow-diagram depicting the Waste Water Treatment plant process

PowerPoint Presentation and peer grading (see rubric)